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UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION.

NO. 80.

BULLETIN OF FOREIGN PLANT INTRODUCTIONS.

Aug. 16 to Sept. 30, 1912.

NEW PLANT IMMIGRANTS.

(NOTE: Applications for material listed in this bulletin may be made at any time to this Office. As they are received they are filed, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it, as well as to others selected because of their special fitness to experiment with the particular plants imported.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.)

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PLATE: Salix sp.

MATTER IN THIS BULLETIN IS NOT TO BE PUBLISHED WITHOUT SPECIAL PERMISSION.

ACACIA MONILIFORMIS. (Mimosaceae.) 33913. Seeds of an acacia from Buenos Aires, Argentina. Presented by Dr. Carlos Thays, Director, Botanic Garden. "A low bushy yellow-flowered shrub found in the vicinity of Tucuman. The young pods are used as fodder for cattle." (Mueller, Select Extra-Tropical Plants.) For distribution later.

AMERIMNON NIGRUM. (Fabaceae.) 33917. Seeds of the caviuna from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. "A large Brazilian tree, furnishing the finest quality of rosewood." (Lindley, Treasury of Botany.) For distribution later.

ASTRONIUM BALANSAE. (Anacardiaceae.) 33922. Seeds from Buenos Aires, Argentina. Presented by Dr. Carlos Thays, Director, Botanic Garden. A hard-wooded timber tree, highly valued in northern Argentina and Paraguay. For distribution later.

BARYXYLUM INERME. (Caesalpiniaceae.) 34330. Seeds from Manila. Presented by Mr. E. D. Merrill, Botanist, Philippine Bureau of Science. "This tree is a native of the Philippines and is one of the best shade trees that we have. It is evergreen and bears large terminal panicles of very showy yellow flowers. The species is of wide distribution in the Malayan region, and in the Philippines grows in nature near the sea shore. It will certainly thrive in Cuba, Porto Rico, and Panama, and probably in southern Florida and southern California." (Merrill.) For distribution later.

BISCHOFIA JAVANICA. (Euphorbiaceae.) 34263. Seeds of the toog from Buitenzorg, Java. Presented by the Director, Department of Agriculture. "A tall tree, known as toog, with a fairly regular, unbuttressed short bole with a wide-spreading crown. It is intolerant of shade. The bark is dark brown, soft to the touch, shedding in thin large scales. The inner bark is red with a thin, dark-red latex. The leaves are alternate, trifoliate and smooth, with the edges of the leaflets toothed. The sapwood is light cream color, the heartwood is red, moderately hard and moderately heavy." (Whitford, Forests of the Philippines.) A beautiful specimen which has been identified as this species, now 40 feet high, is growing at Reasoner Brothers' Nursery, Oneco, Florida. For distribution later.

BROMELIA CARAGUATA. (Bromeliaceae.) 33930. Seeds of the caraguata from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. An Argentine fibre plant the fibre from which is used in making the famous nanduti lace of Paraguay. It is also used for cordage, and rope made from the fibre in some rough tests has compared well with German manila rope. For distribution later.

CAESALPINIA MELANOCARPA. (Caesalpiniaceae.) 33933. Seeds from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. "A stout bushy-topped leguminous tree found in the woods in the vicinity of Tucuman in Argentina. The fruits contain considerable tannin, and the hard, almost black wood is used for building wagons and for framing houses." (Venturi, Trees of Argentina.) For distribution later.

CARYOPHYLLUS SP. (Myrtaceae.) 34309. Seeds from Paraguay. Presented by Mr. C. F. Mead. "In Guarany, this fruit is called Ywapuru. I have never seen it in any place except in the woods in the district between Sapucay and Asuncion, nor can I find any mention of it in botanical books. It grows in bush form to a height of about two meters, the fruit which is about the size and coloring of a dark red plum, being borne in clusters about the main stalks. I have never tasted the fruit but it is very highly spoken of by natives here." (Mead.) For distribution later.

CELTIS TALA. (Ulmaceae.) 33938. Seeds from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. "A thorny tall shrub or small tree, suitable for hedges and street-planting, found in the lower part of the valley of La Plata in Argentina and Uruguay." (Venturi, Trees of Argentina.) For distribution later.

CORYLUS AVELLANA. (Betulaceae.) 34266. Seeds of a filbert from Boscotrecase, near Naples, Italy. Presented by Dr. Gustav Eisen, San Francisco, Cal. "This San Giovanni filbert is the earliest filbert known in this part of Italy, ripening by June 24th. Of very good quality, though not as highly flavored as the wild nut, but remarkably well filled and solid. Valuable on account of its earliness." (Eisen.) For distribution later.

DOLICHANDRA CYNANCHOIDES. (Bignoniaceae.) 33953. Seeds from Buenos Aires, Argentina. Presented by Dr. Carlos Thays, Director, Botanic Garden. "A shrubby vine with trumpet-shaped, reddish-purple flowers found in the extra-tropical forests of Brazil." (Lindley, Treasury of Botany.) For distribution later.

ECHIUM BOURGEANUM. (Borraginaceae.) 34258. Seeds from Teneriffe, Canary Islands. Presented by Dr. George V. Perez, Puerto Orotava. "A very striking Teneriffe alpine plant growing at the Canadas on its rocky walls at an elevation above sea level of between 8000 and 9000 feet. It throws up in the second year a single thyrse of beautiful pink flowers. I have just had one in flower 3½ meters high(11 feet, eight inches.) It may turn out to be a valuable fodder plant in southern California, as goats are very fond of it. Its rosette of leaves is more than a yard across." (Perez.) For distribution later.

ECHIUM CANDICANS x SIMPLEX. (Borraginaceae.) 34259. Seeds from Teneriffe, Canary Islands. Presented by Dr. George V. Perez, Puerto Orotava. "A new hybrid obtained this year by the writer. The thyrse is light blue. It is a beautiful plant." (Perez.) For distribution later.

ENTEROLOBIUM CONTORTISILIQUUM. (Mimosaceae.) 33955. Seeds of the timbo from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. "A large leguminous timber tree, found in Paraguay. It is often planted as a street tree, the wood is much used in carpentry, and the fruits, called 'orejas de negro,' are used to remove spots from linen." (Venturi, Trees of Argentina.) For distribution later.

EUCHLAENA MEXICANA. (Poaceae.) 34257. Seeds of teosinte from Durango, Mexico. Presented by Mr. T. C. Hamm, American consul, who obtained it from Dr. H. W. Jackson. "The plant known as teosinte or asese which is supposed to be the antecedent of common maize grows in some parts of the State of Durango. The plant occurs in a wild state, only one attempt so far as I have been able to learn having been made to cultivate it. Two or three years ago a Mexican ranchman gathered a quantity of the seed which he planted as a forage crop, with most excellent results. The plant flowers in the month of July and matures in November. The height attained by the plant varies greatly according to soil, climatic conditions, etc., the full grown plant running from about fifty to seventy five inches in height in this state. The teosinte closely resembles the common maize in its earlier stages, but becomes much more bushy as it develops, due to the large number of suckers thrown out by the parent stalk. The leaf is very similar to that of the maize in all stages of its development. A single stalk of teosinte will have from ten to fifteen ears, which, unless the teosinte has mixed with maize, have practically no cob or core. The reason why little or no use is made of this valuable plant is that when planted near corn it read-

ily crosses with the latter and spoils the corn crop, which is the staple agricultural crop of this district. It is reported that the natives have made 'tortillas' from the ground seed of the teosinte, but such instances are very rare." (Hamm.) For distribution later.

EUGENIA MATO. (Myrtaceae.) 33958. Seeds of a Eugenia from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. "A tree with edible fruits, forming the principal part of the forests in the vicinity of Tucuman in Argentina." (Venturi, Trees of Argentina.) For distribution later.

EUGENIA PUNGENS. (Myrtaceae.) 33959. Seeds from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. A hard-wooded tree, from the province of Sao Paulo, Brazil, which bears edible fruits. For distribution later.

EXOGONIUM PURGA. (Convolvulaceae.) 33961. Seeds of the jalap from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. "A Mexican climbing plant, with salver-shaped purplish flowers, which furnishes the true jalap tubers of commerce. These are roundish, of variable size, the largest being about as large as an orange, and of a dark color. They owe their well-known purgative properties to their resinous ingredients, and hence worm-eaten tubers are more valued than sound ones, as the insects eat the farinaceous and woody portions of the tuber and leave the resin." (Masters, in Lindley, Treasury of Botany.) For distribution later.

GOSSYPIUM HIRSUTUM. (Malvaceae.) 34289. Seeds of Cambodian cotton from Coimbatore, India. Presented by R. Cecil Wood, Esq., President Agricultural College, through Mr. C. V. Piper. "This cotton has a close resemblance to the American Upland type and has been looked upon as an American cotton that has been acclimatized in Cambodia, though this may not prove to be the case. There is historical evidence of the introduction of a superior type of cotton from Siam to Louisiana in early days, and this may have been the origin of the long staple varieties formerly grown so extensively in the Delta regions of Louisiana and Mississippi. Thus the Cambodia cotton may prove to be related to the American long staple type. A variety of Upland cotton from Cochin China was studied in Egypt in 1910, which may prove to be similar to the present importation. An account of this cotton was published in Bulletin No. 210 of this Bureau series under the title Hindi Cotton in Egypt. The Cambodia cotton has been grown for a few years in southern India and has given much better

than any variety introduced from America. An account of the experiments in India was published in the Daily Consular and Trade Reports, December 7, 1910." (O. F. Cook.) For distribution later.

GOURLIEA DECORTICANS. (Fabaceae.) 33970. Seeds of the chanar from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Gardens. A shrubby legume often forming a small tree having fleshy pods with a single seed and a small yellow pea-like flower. The pulp of the fleshy pods is used to flavor wines in Buenos Aires and is a favorite fruit of the Argentinos. For distribution later.

ORANIA REGALIS. (Phoenicaceae.) 34319. Seeds of a palm from Manila. Presented by Mr. O. W. Barrett, Chief, Division of Horticulture, Philippine Bureau of Agriculture. "A rare palm of the Philippines, rather closely related, I believe, to the coconut, and which, I believe, would make an interesting greenhouse plant; it should also make a good ornamental for southern Florida, Porto Rico and Cuba." (Barrett.) For distribution later.

PANCRATIUM CANARIENSE. (Amaryllidaceae.) 34260. Seeds from Teneriffe, Canary Islands. Presented by Dr. George V. Perez, Puerto Orotava. A bulbous plant with iris-like leaves and umbels of large white flowers, found in the Canary Islands. For distribution later.

PHALOCALLIS SPP. (Iridaceae.) 33996-997. Seeds from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. Two perennials of the iris family, commonly known as Cypella spp. having yellow flowers, and occurring in Brazil, Paraguay and Argentina. For distribution later.

PIPER CHABA. (Piperaceae.) 34328. Seeds of the chaba from the Jardin Colonial, Nogent sur Marne, France. Presented by the Director, Mr. E. Prudhomme. "A native of the Moluccas, cultivated in India for its fruit, the chaba of Indian medicine. The wood and root are used in Bengal for dyeing and give a pale brown on cotton if used alone, but mixed with Caesalpinia sappan, a brownish-red." (Watt, Commercial products of India.) For distribution later.

PIPER CUBEBA. (Piperaceae.) 34327. Seeds of the cubeb pepper from the Jardin Colonial, Nogent sur Marne, France. Presented by the Director, Mr. E. Prudhomme. "The cubebs of commerce, which are of importance chiefly in medicine, are the berries of a species of pepper-vine, easily distinguished from

the ordinary pepper by the stalked and larger berries or 'corns.' The plant is a native of Java, Sumatra , etc., and thrives under similar conditions as pepper, requiring live or artificial supports and a certain amount of shade. The world's supply of cubebs is obtained chiefly from Java, where the plant is cultivated. The plants are best propagated by cuttings taken from among the top or fruitful shoots, such plants being more productive than those taken from near the base." (MacMillan, Handbook of Tropical Gardening.) For distribution later.

PIPTADENIA SPP. (Mimosaceae.) 34000-001. Seeds from Buenos Aires. Presented by Dr. Carlos Thays, Director, Botanic Garden. Two trees forming large forests in Argentina, one furnishing the angico-gum somewhat similar to gum-arabic, and both rich in tannin, the bark sometimes running 40 per cent. For distribution later.

PITTOSPORUM EUGENIOIDES. (Pittosporaceae.) 34306. Seeds of the tarata from the Royal Botanic Garden, Edinburgh, Scotland. Presented by Prof. Bayley Balfour, Director. "A beautiful New Zealand tree whose pale-green leaves with undulating margins, emit, when bruised, a lemon-like odor. The delicate venation and light-colored, almost white, midrib add to the beauty of the leaf. The Maoris mixed the resinous exudation from the bark with the juice of the sow-thistle, and worked it into a ball, which they chewed. In October the tree produces masses of yellowish-green flowers, whose heavy honied odor is almost sickly in its intensity. According to Mr. G. M. Thomson, the plant is probably often self pollinated; but Mr. Kirk points out in his Forest Flora, that, though stamens and pistils are always present, one or other is often abortive, so that the flowers are often practically unisexual. The wood of this species, like that of the other species of the genus, is almost worthless. The tree is often cultivated for its beauty, and is sometimes - though not so often as P. tenuifolium - used to form an ornamental hedge." (Laing and Blackwell, Plants of New Zealand.) For distribution later.

PRIMULA FORRESTII. (Primulaceae.) 34308. Seeds of a primrose from the Royal Botanic Garden, Edinburgh, Scotland. Presented by Prof. Bayley Balfour, Director. "This primrose from southwestern China grows to a height of 3 feet, has a woody rootstock, and deep yellow flowers with an orange eye. Both flowers and foliage are fragrant. First collected by Mr. George Forrest, who found them growing pendulous from dry, shady crevices of limestone cliffs on the eastern flank of the Lichiang Range, northwestern Yunnan, at an altitude of from

9000 to 11000 feet." (Forrest, Primulaceae from western Yunnan.) For distribution later.

PRUNUS ARMENIACA. (Amygdalaceae.) 34264-265. Seeds of apricots from Rome. Presented by Dr. Gustav Eisen, San Francisco, Calif. 34264. "These seeds were procured in a restaurant in Rome. Locality not known. This variety is probably the finest apricot I have tasted, being larger than our average Moorpark, globular but with apex characteristically pointed, the point being short but very acute and set off suddenly and distinctly. Ripe evenly all around. Very sweet and highly flavored. Color deep orange." For distribution later.

PRUNUS DOMESTICA. (Amygdalaceae.) 34267-268. Seeds of plums from Rome. Presented by Dr. Gustav Eisen, San Francisco, Calif. 34267. "Papagone. Average $2\frac{1}{2}$ inches long by $1\frac{1}{2}$ inches wide. Largest $2\frac{3}{4}$ to even 3 inches long by $1\frac{5}{8}$ inches wide. Elongated ovoid. Greenish yellow, with darker green on shaded side. Stalk a short half inch or less long. Fine grey bloom. Very thin and smooth skin. Seed very thin pitted, sulcate edge and remarkably small for the size of the fruit. Flesh firm, sweet and highly flavored, adhering slightly to the stone." 34268. "Prune called Prunaringia grown near Naples. The name may also, and more properly be spelled Prunarigno or Prunarignia, and I am told that possibly it means Prune of India, though I prefer to think that the name in some way refers to the main characteristic of the fruit; one or two vertical cracks, 'rigno,' when the fruit is fully ripe. In size this prune or plum resembles the Papagone but is more irregular. General shape like Papagone but the color is deeper green. Very sweet and even more flavored, but the value of this splendid plum is lowered by the fact that when ripe it always possesses one or two vertical splits on the cheek. Thus it does not present the same fine appearance as the Papagone and could not stand long shipment. But for canning and preserves this plum should be excellent. The seed in proportion to the fruit is considerably larger than the Papagone but somewhat similar in shape; thin and oblong but less curved than in that fruit. Both ripen at about the same time and are at the height of perfection at Boscotrecase by August 1." (Eisen.) For distribution later.

NOTES FROM FOREIGN CORRESPONDENTS.

AFRICA. Southern Nigeria. Mr. Frank Evans writes under date of August 16, 1912. "After leaving Honolulu in April 1911, I took a trip around the Orient, visiting and studying

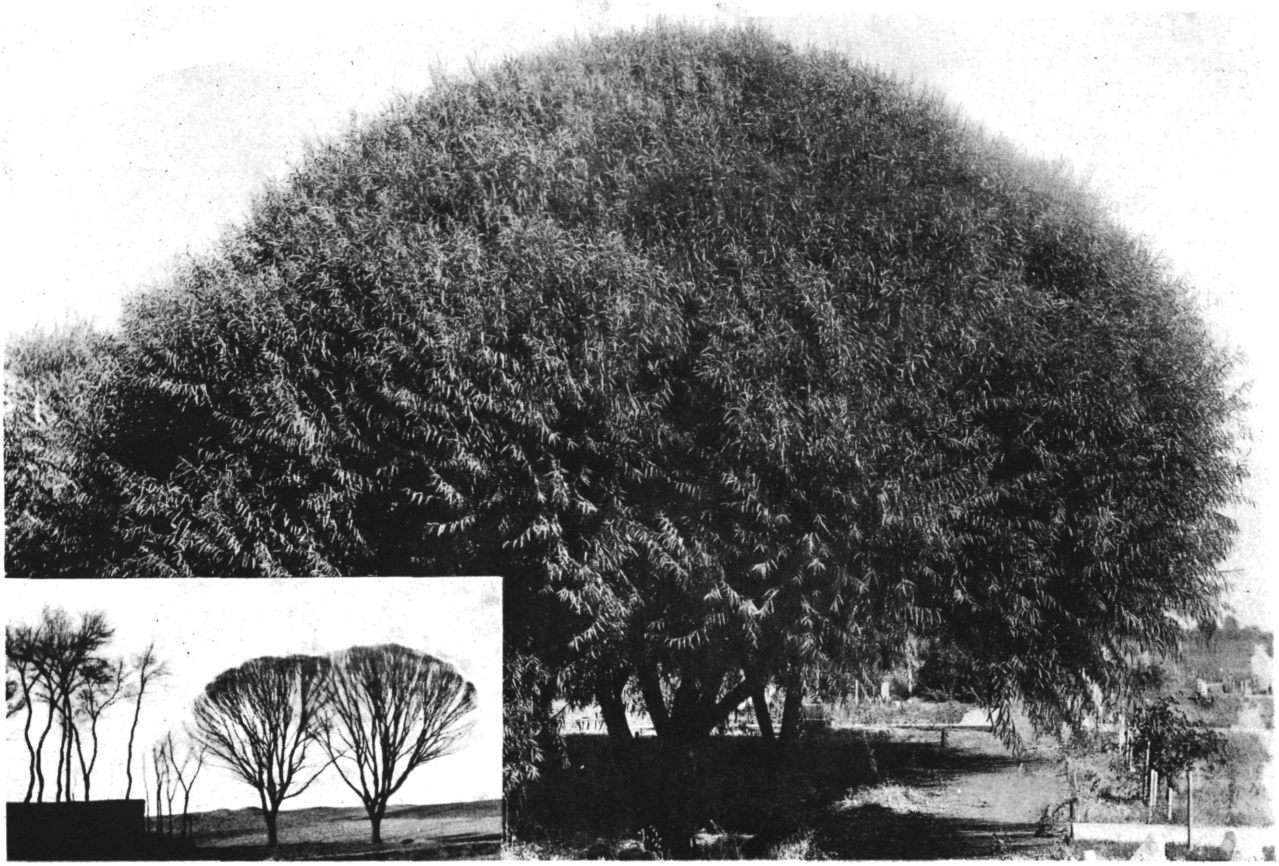
agricultural methods and conditions in Japan, Malay States, Java, Ceylon and Egypt, and then returned to the Trinidad Department for a month or two and have now been appointed Superintendent of Agriculture in the Eastern Province of Southern Nigeria. There is good work to be done here, but it is chiefly of a pioneer character. I only arrived four days ago and as soon as I get settled down, I will ask your aid in obtaining seed of useful economic plants and in return will send you seeds of economic Nigerian plants. Like all West African coast places this climate is bad and I don't suppose I shall be able to stand it for very long, but the experience is interesting and should be useful."

CHINA. Szechuan, Kwan hsien. Mr. H. J. Openshaw writes under date of August 8, 1912; "we were able to 'stand by the ship' right through all the turmoil of revolution. Our city was beseged twice and all 'shot up'. I jumped in and became 'Surgeon General' etc. and really did a lot of good work caring for the sick and wounded. We are on the mountain for a rest and change. It is very delightful; we are really avoiding a hot Chinese summer. My, but a Chinese city with its walls and crowds can be HOT.

To the East we look out on the great Chentu plain, now laden with a heavy rice crop; while to the West we see range after range of mountains with the snow peaks of Thibet for a background.

Szechuan seems slowly getting back to normal. Funds were short and a lot of paper money was issued, of which business men are scarey.

The Thibetans are in revolt and have captured several border cities, but a large force of soldiers have gone forward and it is hoped Thibet will come back into line. In the past she has fared ill at the hands of the Chinese and takes this opportunity to protest."



SALIX SP. Globular-headed willow. S. P. I. No. 17737.

A remarkable Chinese willow, with a dense, naturally flattened globular head, collected by Mr. Frank N. Meyer at Scha-ho-schonn, northern China. The small insert shows the trees as they appear in winter in their native country, while the large photograph shows one of several specimens which are growing in the grounds of the City Cemetery at Chico, California. They were grown from cuttings sent in by Mr. Meyer in March, 1906. This exceedingly handsome tree is growing along an old swale where it seems to thrive with a minimum amount of water, and on August 13, 1912, when photographed it was about 20 feet high, with a spread of about 30 feet, and its trunk was about 47 inches in circumference. From photos by Messrs. Frank N. Meyer and P. H. Dorsett, respectively.